M-DICHLOROBENZENE ($C_6H_4Cl_2$)

also known as 1,3-Dichlorobenzene
Chemical Abstracts Service (CAS) Number: 541-73-1

General Information

m-Dichlorobenzene is a colorless volatile non-flammable liquid, which has no distinctive odor. m-Dichlorobenzene is partially soluble in water and soluble in alcohol and ether. Inhalation is the most likely route of exposure to m-dichlorobenzene, which is readily absorbed from the lungs. Acute exposure to m-dichlorobenzene may result in irritation of the eyes and respiratory tract. Animal studies indicate that m-dichlorobenzene may adversely affect the endocrine system. The carcinogenicity of m-dichlorobenzene has not been classified.

Sources

- m-Dichlorobenzene is produced by reacting liquid benzene with gaseous chlorine in the presence of a catalyst at moderate temperature and atmospheric pressure.
- m-Dichlorobenzene has been used in the production of herbicides, insecticides, pharmaceuticals, and dyes; however, its uses in registered pesticides have been cancelled.

Indiana Emissions

m-Dichlorobenzene emissions totals are not available from the National Emission Inventory (NEI) for the 2014 calendar year.

Measured Concentration Trends

Ambient air monitoring data most accurately represents a limited area near the monitor location. All monitors for air toxics sample every sixth day. The monitoring locations by themselves are not sufficient to accurately characterize air toxic concentrations throughout the entire state, however, results from the monitors will provide exposure concentrations with a great deal of confidence at the monitoring locations.

The ambient air monitoring results were analyzed using U.S. EPA recommended statistical methods. IDEM evaluated the data so that a 95% upper confidence limit of the mean (UCL) could be determined. A 95% UCL represents a value which one can be 95% confident that the true mean of the population is below that value.

To learn more about the current monitoring locations, please visit IDEM's Air Toxics Monitor Siting webpage at: http://www.in.gov/idem/toxic/2337.htm

Data analysis was performed for each monitor that operated for a significant portion of the analysis period. This analysis determined the detection rate, which is defined as the percentage of valid samples taken statewide that had a quantifiable concentration of the pollutant. The statewide detection rate of m-dichlorobenzene for the monitors analyzed from 2006-2015 was

10.3%. This detection rate is too low for IDEM to draw any conclusions about concentration trends of m-dichlorobenzene. IDEM did not perform a trend analysis for any pollutant with a detection rate less than 50%.